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*** YOU HAVE NEW MAIL ***

=> s polycationic (4a) multichromophore?
L1          11 POLYCATIONIC (4A) MULTICHROMOPHORE?

=> s l1 and anionic
L2           5 L1 AND ANIONIC

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3           5 DUP REM L2 (0 DUPLICATES REMOVED)

=> d l3 bib abs 1-5

L3   ANSWER 1 OF 5  USPATFULL on STN
AN     2006:254283  USPATFULL
TI     Methods and articles for strand-specific polynucleotide detection with
       cationic multichromophores
IN     Bazan, Guillermo C., Santa Barbara, CA, UNITED STATES
       Liu, Bin, Singapore, SINGAPORE
PA     The Regents of the University of California, Oakland, CA, UNITED STATES
       (U.S. corporation)
PI     US 2006216734      A1   20060928
AI     US 2006-329861     A1   20060110 (11)
PRAI   US 2005-642883P     20050110 (60)
DT     Utility
FS     APPLICATION
LREP   FITCH EVEN TABIN AND FLANNERY, 120 SOUTH LA SALLE STREET, SUITE 1600,
       CHICAGO, IL, 60603-3406, US
CLMN   Number of Claims: 48
ECL    Exemplary Claim: 1
DRWN   12 Drawing Page(s)
LN.CNT 2161
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     The invention further relates to polycationic
       multichromophores, which may be conjugated polymers, and
       methods, articles and compositions employing them as described herein.
       In some aspects, the invention relates to methods, articles and
       compositions for the detection and analysis of biomolecules in a sample.
       Provided assays include those determining the presence of a target
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biomolecule in a sample or its relative amount, or the assays may be quantitative or semi-quantitative. The methods can be performed on a substrate. The methods can be performed in an array format on a substrate, which can be a sensor. In some embodiments, detection assays are provided employing sensor biomolecules that do not comprise a fluorophore that can exchange energy with the cationic multichromophore. In some aspects biological assays are provided in which energy is transferred between one or more of the multichromophore, a label on the target biomolecule, a label on the sensor biomolecule, and/or a fluorescent dye specific for a polynucleotide, in all permutations. The multichromophore may interact at least in part electrostatically with the sensor and/or the target, and an increase in energy transfer with the polymer may occur upon binding of the sensor and the target. Other variations of the inventions are described further herein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 2 OF 5 USPATFULL on STN
AN 2006:240539 USPATFULL
TI Methods and compositions for aggregant detection
IN Bazan, Guillermo C., Santa Barbara, CA, UNITED STATES
Liu, Bin, Singapore, SINGAPORE
PA The Regents of University of California, Oakland, CA, UNITED STATES (U.S. corporation)
PI US 2006204984 A1 20060914
AI US 2006-344942 A1 20060131 (11)
PRAI US 2005-649024P 20050131 (60)
DT Utility
FS APPLICATION
LREP FITCH EVEN TABIN AND FLANNERY, 120 SOUTH LA SALLE STREET, SUITE 1600, CHICAGO, IL, 60603-3406, US
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 2187
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention relates to an aggregation sensor useful for the detection and analysis of aggregants in a sample, and methods, articles and compositions relating to such a sensor. The sensor comprises first and second optically active units, where energy may be transferred from an excited state of the first optically active unit to the second optically active unit. The second optically active unit is present in a lesser amount, but its relative concentration is increased upon aggregation, increasing its absorption of energy from the first optically active units. This increase in energy transfer can be detected in variety of formats to produce an aggregation sensing system for various aggregants, including for quantitation. Other variations of the inventions are described further herein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 3 OF 5 USPATFULL on STN
AN 2006:214985 USPATFULL
TI Cationic conjugated polymers suitable for strand-specific polynucleotide detection in homogeneous and solid state assays
IN Bazan, Guillermo C., Santa Barbara, CA, UNITED STATES
Liu, Bin, Singapore, SINGAPORE
PA The Regents of the University of California, Oakland, CA, UNITED STATES (U.S. corporation)
PI US 2006183140 A1 20060817
AI US 2006-329495 A1 20060110 (11)
PRAI US 2005-642901P 20050110 (60)
DT Utility
FS APPLICATION

LREP FITCH EVEN TABIN AND FLANNERY, 120 SOUTH LA SALLE STREET, SUITE 1600, CHICAGO, IL, 60603-3406, US
CLMN Number of Claims: 63
ECL Exemplary Claim: 1
DRWN 12 Drawing Page(s)
LN.CNT 2181
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention further relates to polycationic multichromophores, which may be conjugated polymers, and methods, articles and compositions employing them as described herein. In some aspects, the invention relates to methods, articles and compositions for the detection and analysis of biomolecules in a sample. Provided assays include those determining the presence of a target biomolecule in a sample or its relative amount, or the assays may be quantitative or semi-quantitative. The methods can be performed on a substrate. The methods can be performed in an array format on a substrate, which can be a sensor. In some embodiments, detection assays are provided employing sensor biomolecules that do not comprise a fluorophore that can exchange energy with the cationic multichromophore. In some aspects biological assays are provided in which energy is transferred between one or more of the multichromophore, a label on the target biomolecule, a label on the sensor biomolecule, and/or a fluorescent dye specific for a polynucleotide, in all permutations. The multichromophore may interact at least in part electrostatically with the sensor and/or the target, and an increase in energy transfer with the polymer may occur upon binding of the sensor and the target. Other variations of the inventions are described further herein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 4 OF 5 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN
AN 2004-784599 [77] WPIDS
CR 2004-142830
DNC C2004-274631 [77]
DNN N2004-618363 [77]
TI Assaying sample for target polynucleotide, by contacting sample with multichromophore and sensor polynucleotide conjugated to signaling chromophore in solution, and detecting target based on increase in light emitted from chromophore
DC A26; A96; B04; D16; S03
IN BAZAN G C; GAYLORD B S; WANG S
PA (REGC-C) UNIV CALIFORNIA
CYC 104
PIA WO 2004092324 A2 20041028 (200477)* EN 44[5]
AU 2003304043 A1 20041104 (200508) EN
EP 1549772 A2 20050706 (200545) EN
JP 2006510389 W 20060330 (200623) JA 31
ZA 2005001969 A 20060531 (200640) EN 57
KR 2005055717 A 20050613 (200642) KO
ADT WO 2004092324 A2 WO 2003-US26989 20030826; AU 2003304043 A1 AU 2003-304043 20030826; EP 1549772 A2 EP 2003-816297 20030826; EP 1549772 A2 WO 2003-US26989 20030826; JP 2006510389 W WO 2003-US26989 20030826; JP 2006510389 W JP 2004-570933 20030826; ZA 2005001969 A ZA 2005-1969 20050308; KR 2005055717 A WO 2003-US26989 20030826; KR 2005055717 A KR 2005-703254 20050225
FDT AU 2003304043 A1 Based on WO 2004092324 A; EP 1549772 A2 Based on WO 2004092324 A; JP 2006510389 W Based on WO 2004092324 A; KR 2005055717 A Based on WO 2004092324 A
PRAI US 2003-7774444 20030826
US 2002-406266P 20020826
US 2003-648945 20030826
AN 2004-784599 [77] WPIDS
CR 2004-142830
AB WO 2004092324 A2 UPAB: 20060122

NOVELTY - Assaying (M1) sample for target polynucleotide, is new.

DETAILED DESCRIPTION - Assaying (M1) sample for a target polynucleotide, involves providing a sample that is suspected of containing a target polynucleotide, providing a polycationic multichromophore (I) that upon excitation is capable of transferring energy to a signaling chromophore (II), providing an anionic sensor polynucleotide (III) that is single-stranded and is complementary to the target polynucleotide, where (III) is conjugated to (II), (III) interacts with (I) and emitted light can be produced from (II) upon excitation of (I) in the absence of target polynucleotide, and a greater amount of emitted light is produced from (II) upon excitation of (I) in the presence of target polynucleotide, contacting the sample with (III) and (I) in a solution under conditions in which (III) hybridizes to the target polynucleotide, if present, applying a light source to the solution that excites (I), and detecting whether the light emitted from (II) is increased in the presence of sample.

INDEPENDENT CLAIMS are also included for:

(1) a polynucleotide sensing solution (PS) comprising (II), and (I) that is capable of transferring energy to (II) upon excitation when brought into proximity to it, where a greater amount of energy can be produced from (II) in the presence of the polynucleotide being sensed when (I) is excited;

(2) a kit (K1) for assaying a sample for a target polynucleotide, comprising (III) that is single-stranded and is complementary to the target polynucleotide, (II), (I) that is capable of transferring energy to (II) upon excitation when brought into proximity to it, where (III) interacts with (I) and a detectibly greater amount of emitted light is produced from (II) upon excitation of (I) in the presence of target polynucleotide, and a housing for retaining the reagents of the kit;

(3) a signaling complex (C1) formed by (M1);

(4) a substrate-bound complex (C2) formed by (M1); and

(5) a sensing complex comprising (III) that is single-stranded and is complementary to a target polynucleotide, and (I) that is capable of transferring energy to (II) upon excitation when brought into proximity to it, where (III) is attached to (II), (III) interacts with (I) and emitted light can be produced from (II) upon excitation of (I) in the absence of the target polynucleotide, and a greater amount of emitted light is produced from (II) upon excitation of (I) in the presence of target polynucleotide.

USE - (M1) is useful for assaying sample for a target polynucleotide such as DNA or RNA (claimed). (M1) is useful for assaying sample for mRNA, ribosomal RNA, transfer RNA, single-stranded RNA or single-stranded DNA viral genomes, mitochondrial DNA, double-stranded RNA, plasmids, phage and viroids.

ADVANTAGE - (M1) enables to assay for different target polynucleotides in a sample simultaneously using different signaling chromophores conjugated to sensor polynucleotides. (M1) does not necessarily require labeling of each sample to be analyzed by covalent coupling of lumophores or chromophores to the polynucleotides contained in or derived from the sample prior to analysis.

L3 ANSWER 5 OF 5 USPATFULL on STN
AN 2004:184461 USPATFULL
TI Methods and compositions for detection and analysis of polynucleotides using light harvesting multichromophores
IN Bazan, Guillermo C., Santa Barbara, CA, UNITED STATES
Gaylord, Brent S., Santa Barbara, CA, UNITED STATES
Wang, Shu, Goleta, CA, UNITED STATES
PA The Regents of the University of California, Oakland, CA, UNITED STATES (U.S. corporation)
PI US 2004142344 A1 20040722
AI US 2003-648945 A1 20030826 (10)
PRAI US 2002-406266P 20020826 (60)
DT Utility

FS APPLICATION
LREP BINGHAM, MCCUTCHEN LLP, THREE EMBARCADERO, SUITE 1800, SAN FRANCISCO, CA, 94111-4067
CLMN Number of Claims: 55
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 1305
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods, compositions and articles of manufacture for assaying a sample for a target polynucleotide are provided. A sample suspected of containing the target polynucleotide is contacted with a polycationic multichromophore and a sensor polynucleotide complementary to the target polynucleotide. The sensor polynucleotide comprises a signaling chromophore to receive energy from the excited multichromophore and increase emission in the presence of the target polynucleotide. The methods can be used in multiplex form. Kits comprising reagents for performing such methods are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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